



Pathways

Price £ 4.00 (Free to members)

The newsletter of Leger ME/CFS Supporting Myalgic Encephalopathy or Encephalomyelitis (ME), Chronic Fatigue Syndrome (CFS), Post Viral Fatigue Syndrome (PVFS), Fibromyalgia Syndrome (FMS), Patients & Carers.

Welcome to Pathways No. 56. (Summer 2018)



This is a summer flowering clematis is named "Piilu"

You Write In

Sue Writes: - Thank you that you still send e-mails despite that I don't attend the group. Possibly in the distant future I'll turn up!

I just thought I'd share something with you and perhaps it could be a help to others. I have recently got a Vitamin D deficiency because of staying in all the time as my M.E is quite bad. I found out by accident as the NHS was looking at another problem and sent me for blood tests. I then found out that my Vit D was 27 units and it should be above 75. It's called, by the NHS, the sunshine vitamin as only the sun can make it. Symptoms include fatigue, pains aches, depression mostly what you get with M.E anyway. Although I also had an outbreak of eczema with it. So, people might not realise they have a deficiency and think that their M.E. is getting worse.

You can only really tell by having a blood test. At the very worst it is associated M.S and cancer. If depression is getting worse or even if it isn't perhaps people should ask for some blood test every six months if they have M.E and spend a lot of time indoors. Mine has happened over the past 7 months approximately. There are Vit D supplements available from health shops. I just thought I'd share this as it could have been avoided. I hope this will help others.

Thank you for your letter Sue. You are quite correct in your comments about Vitamin D. Vitamin D is on my checklist when doing case reviews and for new members. For most people with ME/CFS, I find vitamin D depletion has been picked up by the GP and it is treated with prescription medicines rather than members buying food supplements. If the GP hasn't checked Vitamin D levels out it out, I advise patients accordingly.

Regarding the consequences of low vitamin D levels, for patients with ME/CFS treating with vitamin D reduces the fatigue and pain levels by around 50% if a problem. Vitamin D is essential for bone wellbeing, and if low, a bone density scan would be needed to check for osteoporosis. Regarding the local MS clinic, low vitamin D is a common finding among MS patients, which is treated if they find it. The world patterns of MS appear to coincide with lower levels of sunlight, but I've not seen any causal relationship demonstrated. Regarding cancer, low Vitamin D may adversely affects the body's natural defence system.

Josey Writes: - I've just received a refund for the Ethel barge ticket. I was so looking forward to a day out. I'm not very happy about this. Could you please explain why it has been cancelled?

To hire the Ethel for the day costs around £240. Because the Ethel barge is a registered charity run by volunteers, and due the British waters regulations, only a maximum of 12 people can be on the boat at any one time. So, I must charge everyone who attend around £20.

There are two reasons: -

1) When we sent the last copy of Pathways out, an Ethel booking form was included. Only two people booked. There were no further booking from subsequent emails.

2) There was also an issue regarding public liability insurance which the group needs to run these trips. An email was received from the Ethel Trust saying we had to have £2 million pounds cover. We only have £1 million. The insurers would not increase the coverage to meet the Ethels requirements. If I had a full boat, I would have to go to another insurer and would have to add this charge to the would be added to the ticket price.

John Writes: - Can you explain why you haven't arranged a show of 'Unrest' like some other groups have around the country.

We have, at the May meeting and at the June meeting. However, I don't think you missed anything important. The film showed a severe case in the USA, and the difficulties with their healthcare system. They also include outrageous cases. I really gained nothing positive from watching the film, and this was the feeling of others who saw it. However, a member has donated a copy to the group library which is available for members to loan.

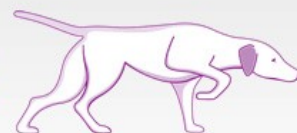
Welfare Rights Matters.*With thanks to Benefits and Work.***End to Some PIP (Personal Independent Payments) Reviews**

The government says that it will end unnecessary PIP reviews from this summer.

It appears that the changes will affect claimants who get both the enhanced rates of PIP and whose condition is likely to stay the same or get worse. Instead of a full review of their claim, these claimants will have only a light touch review every ten years to check that, for example, their contact or bank details have remained the same. Claimants with progressive conditions, such as Parkinson's and MS may be most likely to be considered. But we are very short on detail about the changes yet. We'll publish more information as soon as it's available.

Benefits and Work

Guides you can trust



Fully paid up Leger ME members had access to benefit and Work guides as part of the membership deal. For further information contact the office.

Latest PIP Statistics

We now know that up until April of this year, 1,264,000 claimants had been forced to move from DLA to PIP. Of these, 354,000 were refused any award of PIP at all, approximately 28% of all those assessed. And the failure rate is rising over time. The overall failure rate for the 12 months to April 2017 was 27%. For the 12 months to April 2018 the failure rate rose to 31%. The latest statistics also reveal that there has been a significant fall in the number of successful PIP new claims. Award rates have fallen from 42% in January to 36% in April.

PIP Assessments to Be Video Recorded

A government minister has announced their intention to ensure that all PIP assessments are video recorded in the future. Sarah Newton, Minister of State for Disabled People, said:

A key part of our efforts to improve the assessment process will be making video recording of the PIP assessment a standard part of the process. We will be piloting videoing the assessment with a view to then rolling this out across Great Britain. Up until now, recording of assessments has always been audio only. Do you think video recording is a good idea? Or would you find it too intrusive? The DWP don't appear to be planning any sort of consultation on this issue, so we would love to know what you think.

DWP Court Defeat Over ESA To UC (Universal Credit) Transfers

The DWP have suffered yet another major court defeat. This time the issue was the deliberate impoverishment of claimants forced to transfer from ESA to UC because they had moved to a different local authority. Claimants who transfer from ESA to UC as part of the managed migration process beginning in July 2019 will have transitional protection. This will mean that they are not worse off, initially at least. But claimants who have a change of circumstances, such as a house move to a new area, get no such protection. As a result, the claimants in the latest court case were almost £180 a month worse off due to the loss of their severe disability premium (SDP) and enhanced disability premium (EDP). The court ruled that this was discriminatory and unlawful, and the claimants will now receive the income they lost out on. The DWP announced last week that ESA claimants will no longer be moved to UC until transitional protection begins. They also announced moves to identify claimants who have lost their SDP and repay them the money they have lost out on. However, no mention was made in the government's statement of any intention to compensate claimants for the loss of their EDP.

National Audit Office Condemns UC

The National Audit Office has found that UC causes hardship, is expensive, inefficient and hugely behind schedule. It has also found that the supposed gains from UC, such as increased employment, are all unproven and that it will probably never be possible to prove any of them anyway. Nonetheless, the NAO also says that UC is now so firmly embedded in job centers that there is no practical alternative to continuing full roll out.

Come fly with M.E by Susan Harrison

Has anyone let you into the secret of the airport wheelchair service yet? Ok, it's not really a secret at all but I do think it's worth writing about. Anyone can use this service, just by requesting it when booking a flight. You'll be asked a couple of questions about the reason for your request and the level of help you need but that's it.

As with a lot of things, there are always people who miss-use such help. They'll be fast-tracked through to the gate, all ready for their flight, only to be seen a bit later happily running around the duty-free, arms full of goodies before returning to their wheelchair. It may well be that these miscreants will make the service harder to get for those with genuine needs, which would be a real shame for people like us who don't have an obvious, visible, disability.



If you fancy flying somewhere, but don't think you can handle the hassle at the airport, please read on. The service begins as soon as you enter the airport and report to the specialist help desk. You'll be assigned a wheelchair (if you don't have your own) and a helper, who will then take you, and one travelling companion, to the front of the check-in queue, then through a special priority lane at security and finally park you at your gate. Should you happen to be travelling anything other than economy, then you will be taken to your airlines special lounge. A helper returns once the plane is ready to board. The helpers know what time you need to be ready to board and will make sure you get there. They also know all about any transfer details, if there are any delays along the line and which carousel your luggage will be on. Some airports use those little electric cars as well as wheelchairs. Just relax and go with the flow. Your helper will need you to sign a form to say you have used the service but that's all you must do.

If, like me, you can manage to walk a bit and get yourself on and off the plane, that's fine. Otherwise, you'll be taken up in a wheelchair on a lift via a vehicle called an Ambulift. On the many occasions I've used this service I've been encouraged to stay in the chair and use the Ambulift. Doing this allows you to board the plane before everyone else and make yourself comfortable before the other passengers start boarding.

Many airlines have special seating set aside for disabled users which are usually very close to the door to minimise any walking you must do. Any special needs people are always seated first but are the last to disembark. Don't get frustrated as everyone gets off before you. Don't forget, they will have stand in line through passport control and then stand around waiting for the bags to come off the carousel. When you disembark, you'll breeze to the front of the immigration queues, and then be wheeled to the carousel, where your bags will probably just be starting to come through. Your wheelchair service takes you to just outside the airport where you'll be helped into your taxi, coach, etc.

I was quite apprehensive using this service at first. Could you relate to me if I said I felt a bit of a fraud? I mean, I can stand up on my own (for a little while) and can walk (for a bit). Any embarrassment I might still feel these days is countered by the thought that I'm getting 5-star treatment for a change, not being judged and not wasting precious energy. It also means I can go abroad, where it can often be a lot cheaper and warmer than holidaying in the UK.

Overall, I've found the helpers to be smiley, happy people, but do be aware that they work shifts, with long hours and are very often overworked, certainly at UK airports. It just needs one plane to be a little bit late and come in at the same time as another two and they may have to juggle you to get the job done. This could mean being pushed to a holding area and having to wait for a bit before you're moved on. One time, it meant a cheery young man was left to push my wheelchair and someone else's at the same time! Luckily my travelling companion was able to step in to push me, but my helper was quite proud of the fact he could manage two chairs at once!

I've used the wheelchair service at many UK and foreign airports and luckily don't have a bad experience to quote. The one awkward moment was a foreign helper asking for a tip. The funny thing was I'd already offered one helper something and had told me no thank you, they were not supposed to take anything. It was the next helper at the same airport who muttered. Tip? Tip? Money? He may well have been new and just trying his luck. I felt a bit awkward that firstly had asked and secondly, I didn't have any money on me. I just gesticulated that I had no money and thanked him for his help. The language barrier might sometimes come between you and your helper but politeness respect, and a smile can go a long way.

This wheelchair assistance service is available for cruise ships as well. If you're looking into a holiday in the UK or abroad, it might be worth asking if they can help you in any way.

Happy Holidays.

News Items of Interest: Cannabis Oil

You will most likely have heard in the news about a child returning from Canada having his Cannabis oil confiscated by customs when he entered the U.K. According to his parents, it is the only thing that appeared to control his epilepsy. Once his oil was confiscated he was admitted to hospital and only released when the oil was returned following a public outcry and special license being given by the home secretary. As a result, Home Secretary Sajid Javid has announced a review of the official treatment of cannabis for medicinal use.

Cannabis, also known as marijuana among other names, is a psychoactive drug from the Cannabis plant intended for medical or recreational use.

The main psychoactive part of cannabis is tetrahydrocannabinol (THC); one of 483 known compounds in the plant, including at least 65 other cannabinoids. Cannabis can be used by smoking, vaporizing, within food, or as an extract. Cannabis is often used for its mental and physical effects, such as a "high" or "stoned" feeling, a general change in perception, euphoria (heightened mood), and an increase in appetite.

Onset of effects is within minutes when smoked, and about 30 to 60 minutes when cooked and eaten, lasting between two and six hours. Short-term side effects may include a decrease in short-term memory, dry mouth, impaired motor skills, red eyes, and feelings of paranoia or anxiety. Long-term side effects may include addiction, decreased mental ability in those who started as teenagers, and behavioral problems in children whose mothers used cannabis during pregnancy. Studies have found a strong relation between cannabis use and the risk of psychosis, though the cause-and-effect relationship is debated.

Cannabis is currently a controlled drug as classified by the Misuse of Drugs Act 1971.

A follow-up to this law, the Misuse of Drugs Regulations Act 2001, placed it under Schedule 1, which is the category for substances with no medicinal value. And this is the schedule being considered by the review.

Cannabis plants are made up of more than 100 different cannabinoids, which have different impacts on the body and are concentrated to different extents in certain parts of the plant. The most well-known of these are THC and CBD. THC is the psychoactive cannabinoid - the one that recreational users use to get "high". CBD does not have this effect. While almost all cannabinoids are controlled substances under the Misuse of Drugs Act, CBD - or cannabidiol as it is also known - is not. For example, industrial hemp may be grown under license in the UK. It is a strain of the cannabis plant that contains little or no THC but does contain CBD.

Cannabis oil and Cannabis oil

The Home Office says that it can contain a maximum THC content of 0.2% and that the THC must not be easily separated from it. Industrial hemp can be used for things such as building materials and clothing. CBD oil can also be extracted from these plants and, as it is a legal cannabinoid, can be sold in the UK. The oil has been thought to have some medicinal properties, including relieving inflammation, pain relief and reducing anxiety, although there have not been conclusive scientific studies on this.

Bodily effects of Cannabis

Eyes:

- Reddening
- Decreased intra-ocular pressure

Mouth:

- Dryness

Skin:

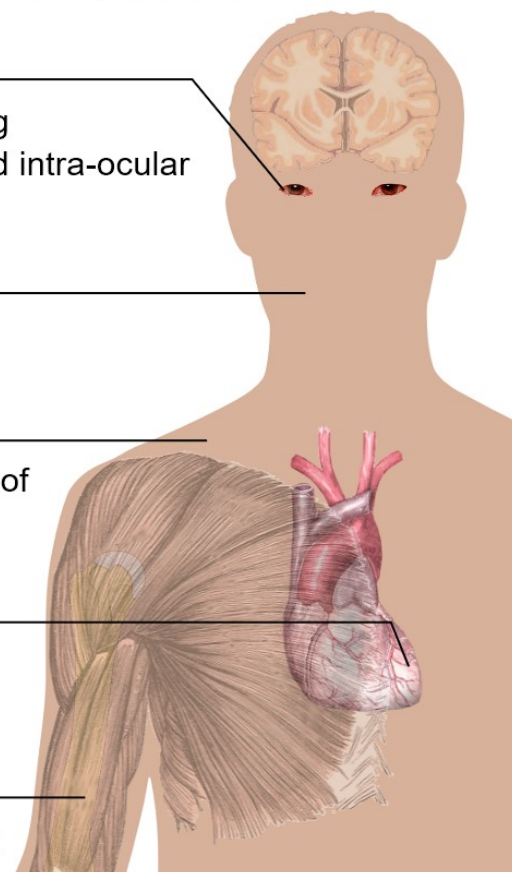
- Sensation of heat or cold

Heart:

- Increased heart rate

Muscles:

- Relaxation



Personal use

In 2016, the Medicines and Healthcare products Regulatory Agency (MHRA) said that CBD products, if advertised for these medical purposes, needed to be licensed. Licenses for CBD oil as a medicine have not been granted yet but the products can still be sold if claims are not made about their medical benefits. High street supplements supplier Holland and Barrett sells some CBD oils as food supplements.

The oil that has been in the news recently due to its use by those with epilepsy is cannabis oil, which has a higher THC content, and so, unlike CBD oil, is not usually allowed in the UK.

There is a product called Sativex, which is a 50-50 mix of THC and CBD produced in a lab, has been approved for use in the UK by the MHRA as a treatment for multiple sclerosis. However, in 2014, the National Institute for Health and Care Excellence, which issues guidance to NHS doctors, gave the medicine "do not recommend" status, saying it was not cost-effective. Sativex is a spray. Each 10ml bottle contains 90 doses and costs around £140.

Regarding the child in the news - Once his Canadian version of cannabis oil was returned, he was discharged from hospital. Where epilepsy goes, most cases can be controlled by medicines—some cases needing three different sorts. However, there are a significant number of cases which can't be controlled by the usual medicines. The parent is right to be concerned, because uncontrolled epilepsy carries a high risk of unexpected death. When by whatever means they find something which they believe it appears to help when conventional medicines fail it will always cause controversy

The individual persons use of controlled (illegal) drugs is not really a good idea.

1) There is no guarantee of quality, efficacy or strength. This is borne out by reports of several deaths due to drugs sold at parties.

2) In the UK there are penalties for illegal possession, use, or supply. The table below summarizes the situation.

<u>Class of Illegal drugs.</u>	<u>Drugs Included</u>	<u>Possession</u>	<u>Dealing</u>
Class A drugs are considered to be the most harmful and attract the most serious punishments and fines.	These include heroin, cocaine, ecstasy and LSD.	If found guilty by a court of law of possessing Class A drugs you could go to prison for up to seven years and be fined.	If you sell Class A drugs you could receive a life imprisonment.
Class B Some people think having cannabis is less serious than other drugs, but if you're caught with cannabis the police will always take action	These include amphetamines, such as speed and barbiturates, and cannabis.	People found guilty of possessing a Class B drug could go to jail for up to five years and be fined.	Those caught and found guilty of trafficking a Class B drug can be sent to prison for up to 14 years
Class C It is illegal to have, give away or deal in Class C drugs.	tranquillisers, Valium (benzos) and anabolic steroids.	Maximum penalties for possession are two years in jail plus an unlimited fine.	Dealing or supplying could get you 14 years in jail plus an unlimited fine.

Plant-based diet

A plant-based diet is based on foods derived from plants, including vegetables, wholegrains, legumes, nuts, seeds and fruits, with few or no animal products

People choose a plant-based diet for a variety of reasons including concern about the treatment of animals, health reasons, environmental concerns or because of taste and social pressure. Plant-based diets are becoming more popular and if they are well-planned, can support healthy living at every age and life-stage.

Types of plant-based diets include:

Lacto-ovo vegetarians – eat dairy foods and eggs but not meat, poultry or seafood.

Ovo-vegetarians – include eggs but avoid all other animal foods, including dairy.

Lacto-vegetarians – eat dairy foods but exclude eggs, meat, poultry and seafood.

Vegans – don't eat any animal products at all, including honey, dairy and eggs. Many shop bought ready-made products may contain animal ingredients so the labels of all manufactured products do need to be read carefully.

Variations of plant-based diets include:

- **Pescetarians** – eat fish and/or shellfish.
- **Semi-vegetarians (or flexitarians)** – occasionally eat meat or poultry.

Eating for optimum health

Diets centred on a wide variety of plant foods offer affordable, tasty and nutritious options. Plant-based diets which are rich in beans, nuts, seeds, fruit and vegetables, wholegrains such as oats, rice, and cereal-based foods such as breads, and pasta can provide all the nutrients needed for good health. This includes essential fats, protein, vitamins, minerals and plenty of fibre too. Well balanced plant-based diets, that are also low in saturated fat, can help you manage your weight and may reduce your risk of type 2 diabetes, cardiovascular disease and some cancers. However, as with any diet, plant-based nutrition needs to be planned.



Most nutrients are abundantly available in plant-based diets, but if you are avoiding all or minimising your consumption of animal-derived foods there are a few nutrients that you need to pay attention to.

Calcium

Calcium is essential for bone health, along with weight-bearing exercise and a healthy diet. An adult requires approximately 700mg per day. Dairy foods are rich in calcium but if you are not eating these make sure you obtain calcium from other sources like fortified plant-based dairy alternatives, dried fruit e.g. figs, nuts such as almonds, leafy green vegetables, red kidney beans, sesame seeds, tahini and tofu to lower your risk of bone fractures.

Omega 3 fatty acids

These fats have been shown to be important for health and are commonly found in oily fish. However if you are not eating fish, plant sources of omega 3 include walnuts, flax (linseed), hemp seeds, chia seeds and soya beans. Oils such as hemp, rapeseed and flaxseed oil provide essential omega 3 fats and are preferable to corn/sunflower oils.

Vitamin D

Vitamin D is needed to keep bones, teeth and muscles healthy and is made in our bodies when our skin is exposed to appropriate sunlight. In the UK this is usually between April and September. During the winter months, we need to get vitamin D from our diet because the sun isn't strong enough for the body to make it. Plant-based sources of vitamin D include sun-exposed mushrooms and fortified foods such as vegetable spreads, breakfast cereals and plant-based dairy alternatives. Since it's difficult to get enough vitamin D from food alone, everyone should consider taking a daily supplement of 10mcg/ day during the autumn and winter months. Some vitamin D supplements are not suitable for vegans. Vitamin D2 and lichen-derived vitamin D3 are suitable. Find out more about this in our Vitamin D Food Fact Sheet

Iodine

The major sources of iodine in our diet are dairy products and fish. The iodine content of plant foods depends on the iodine content of the soil which is variable. Foods grown closer to the ocean tend to be higher in iodine. Where soils are iodine deficient, iodised salt and seaweed provide iodine which is needed in moderation. As the iodine content of seaweed is variable, and sometimes too high, guidance is not to consume sea vegetables more than once a week. An excess of iodine is also unhealthy so if you are taking a supplement, discuss this with your dietitian. Find out more in our Iodine Food Fact Sheet

Vitamin B12

We need vitamin B12 for many reasons. Too little can result in fatigue, anaemia and nerve damage and increase homocysteine levels leading to cardiovascular disease. Most people get vitamin B12 by eating animal products. If you are eliminating all animal derived foods, the only reliable sources of vitamin B12 are fortified foods and supplements. Suitable B12-fortified foods include some breakfast cereals, yeast extracts, soya yoghurts and non-dairy milks. To make sure you get enough vitamin B12, either eat fortified foods at least twice a day, aiming for 3mcg of vitamin B12 a day, or take a supplement, 10mcg daily or at least 2000mcg weekly. If you are worried whether you are obtaining sufficient vitamin B12, a dietitian can calculate your intake from food/supplements or a doctor can check your blood homocysteine levels.

Iron

Plant sources of iron include dried fruits, wholegrains, nuts, green leafy vegetables, seeds and pulses. The form of iron in plant foods is absorbed far less efficiently compared to iron from animal derived sources such as meat and eggs. Eat plenty of fruits and vegetables rich in vitamin C to help the iron to be absorbed e.g. citrus fruits, strawberries, green leafy vegetables and peppers.

Zinc

Phytates found in plant foods such as wholegrains and beans reduce zinc absorption, so it's important to eat good sources of zinc-containing foods. Eat fermented soya such as tempeh and miso; beans (soak dried beans then rinse before cooking to increase zinc absorption); wholegrains; nuts; seeds and some fortified breakfast cereals.

Selenium

Plant sources of this mineral include grains, seeds and nuts. Just two brazil nuts daily will provide you with your daily requirement of selenium

Protein

Plant-based sources of protein include lentils, beans, chickpeas, seeds, nuts and nut butters (e.g. peanut butter), and tofu. Eggs, and dairy are also good sources if you are eating these. Meat substitutes like vegetarian burgers, soya sausages, and other meat alternatives can be useful for those adapting to a plant-based diet and can provide a source of protein. However as with any processed foods, these can often be high in salt and fat so should be used in moderation. These products may contain animal ingredients such as eggs, milk derivatives and honey so careful label reading is necessary if you wish to follow a vegan diet.

Sustainable eating

In the UK, it is estimated that well-planned completely plant-based, or vegan, diets need just one third of the fertile land, fresh water and energy of the typical British 'meat-and-dairy' based diet. With meat and dairy being the leading contributor to greenhouse (GHG) emissions, reducing animal based foods and choosing a wide range of plant foods can be beneficial to the planet and our health.

Summary

Well-planned plant-based diets can support healthy living at every age and life-stage. Include a wide variety of healthy whole foods to ensure your diet is balanced and sustainable.

Further information:

Food Fact Sheets on other topics including Iodine and Vitamin D are available at www.bda.uk.com/foodfacts

Useful links:

The Vegan Society
www.vegansociety.com

The Vegetarian Society
www.vegsoc.org



This Food Factsheet is a public service of The British Dietetic Association (BDA) intended for information only. It is not a substitute for proper medical diagnosis or dietary advice given by a dietitian. If you need to see a dietitian, visit your GP for a referral or: www.freelancedietitians.org for a private dietitian. To check your dietitian is registered check www.hcpc-uk.org

This Food Fact Sheet and others are available to download free of charge at www.bda.uk.com/foodfacts

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The information sources used to develop this fact sheet are available at www.bda.uk.com/foodfacts

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The Magnesium Connection.*A personal view by Dr S Myhill*

I have struggled for over twenty years to try to make sense of red cell magnesium results. It seems that they are almost invariably low in patients with chronic fatigue syndrome. Furthermore, so many patients with chronic fatigue syndrome do benefit from magnesium by injection. You could argue that I have been a bit naughty in the past by using a low intracellular magnesium as an excuse for trying magnesium injections! This is really to encourage GPs to use the injections because clinically they are so helpful. Often, paradoxically, when I repeat a red cell magnesium, it is only marginally better, but nonetheless the magnesium injections often afford marked improvement clinically.

I now believe that a low red cell magnesium is a symptom of mitochondrial failure. It is the job of mitochondria to produce ATP for cell metabolism and about 40% of all mitochondrial output goes into maintaining calcium/magnesium and sodium/potassium ion pumps. I suspect that when mitochondria fail, these pumps malfunction and therefore calcium leaks into cells and magnesium leaks out of cells. This, of course, compounds the underlying mitochondrial failure because calcium is toxic to mitochondria and magnesium necessary for normal mitochondrial function. This is just one of the many vicious cycles we see in patients with fatigue syndromes.

The reason for giving magnesium by injection is to reduce the work of the calcium/magnesium ion pump by reducing the concentration gradient across cell membranes.

So, a low red cell magnesium is an indication for giving magnesium by injection. Doing this makes the work of the ion pumps less hard and therefore helps mitochondria to work better. This explains why it is a waste of time measuring serum magnesium. Serum levels are maintained at the expense of intracellular levels. If serum levels change this causes heart irregularities and so the body maintains serum levels at all cost. It will drain magnesium from inside cells and indeed from bone to achieve this.

Correcting a deficiency.

Having said that, getting serum levels as high as possible will make the job of the calcium/magnesium ion pump much easier. Therefore, intracellular levels can be improved by taking magnesium supplements. There are lots of different ways one can do this. The only way I can guarantee to get magnesium levels up is by using Magnesium by injection. I have yet to see a red cell magnesium result which is too high. However, it is theoretically possible to overdose with magnesium in people with kidney failure.

Some people never manage to get their red cell magnesium levels into the normal range and one must settle for low normal or levels just outside the normal range. Dr John McLaren Howard tells me that there is a biphasic normal distribution of magnesium. Because I see low magnesium almost routinely in patients with fatigue syndromes, I just wonder if this vicious cycle of low magnesium and fatigue has a genetic predisposition.

Magnesium by mouth

Are you taking enough magnesium in the diet? The recommended daily allowance is 300mgs for men, 350mgs for women.

- There are various food supplements available commercially e.g. from BioCare.
- The richest source of magnesium in the diet is from chocolate, nuts, green vegetables and seeds.
- You could use a magnesium rich salt such as Solo.
- Use a bottled water rich in magnesium.
- Hard water also contains more magnesium than soft water.
- Most processed foods are low in magnesium.

Is magnesium's absorption blocked?

Calcium and magnesium compete for absorption and so too much calcium in the diet will block magnesium absorption. Our physiological requirement ratio for calcium to magnesium is about 2:1. In dairy products the ratio is 10:1. So, consuming a lot of dairy products will induce a magnesium deficiency. Tea contains tannin, which binds up and chelates all minerals including magnesium. If tea is to be drunk, don't have it with food. Incidentally, tea drinking is a common cause of iron deficiency anemia in the UK for this same reason.

Vitamin D is necessary for the body to utilise magnesium. The only significant source of vitamin D is direct sunshine on the skin (the effect is not the same through glass). Only a small amount is required to make a difference – 10 minutes a day on the face and hands has an effect. One hour of whole body sunshine in summer can produce 10,000iu! The RDA for vit D is set ridiculously low at 400iu – in America it has just been raised further, but I like people to have at least 2,000iu and many people I recommend 10,000iu daily. At this level of dosing there are no side effects and no toxicity. In winter, in our climate, we should all be taking vitamin D.

Hypochlorhydria – magnesium requires an acid environment for its absorption and hypochlorhydria will result in poor magnesium absorption. —at last I have sussed out why this is such a common problem. I see this problem very commonly in CFS!

Are you a magnesium loser?

- All diuretics will make you pee out magnesium. By this I do not just mean drugs, but also tea, coffee and alcohol. Even some herbal teas are mildly diuretic.
- Hyperventilation makes you pee out magnesium. This is because hyperventilation induces a respiratory alkalosis, the body pees out bicarbonate to compensate, but each bicarbonate is negatively charged and carries a positively charged cation with it – in this case magnesium.
- Heavy exercise makes you pee out magnesium. This should not be a problem for CFS patients (although many are ex-athletes!) but does explain why long-distance runners may suddenly drop dead with heart dysrhythmias.
- Magnesium is lost at times of stress. This also includes hypoglycemia, food allergy reactions and detoxification.

Can you hang on to magnesium?

For magnesium to be retained inside cells you need good cell membranes. The two important facets of cell membranes are: to have good antioxidant status and have good levels of fats and Essential Fatty Acids in the diet. Boron is necessary for normal calcium and magnesium metabolism. Calcium and magnesium metabolism is of critical importance in livestock. Indeed, vets will tell you about the dramatic effects that injecting these minerals has on cows at calving time.

This feature is abridged. Please see Dr Myhills website <http://www.drmyhill.co.uk/>

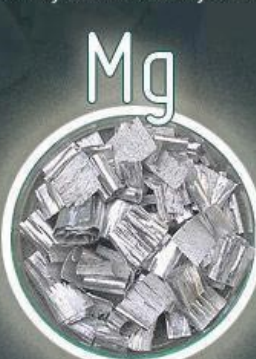
MAGNESIUM

THE ESSENTIAL FORGOTTEN MINERAL

Magnesium is a mineral needed by EVERY CELL of your body.

Foods Highest In Magnesium

- Crude Rice Bran 922mg
- Swiss Chard 860mg
- Purslane 850mg
- Spinach 756mg
- Dark Cocoa Powder 499mg
- Almonds 395mg
- Coffee 327mg




Mg

Can Magnesium Deficiency Cause Cancer?

Researchers found that 46% of the patients admitted to an intensive care unit in a tertiary cancer center presented as deficient in magnesium.

Did you know...refined grains remove 80-97 percent of magnesium?



In Egypt, the cancer rate was only about 10% of that in Europe and America. Among the rural population, it was practically non-existent. These cancer-free populations have an extremely high magnesium intake of 2.5 to 3g which is 10 times more than in most Western countries.

The Spark of Life

It creates energy in each and every cell by activating ATP the storage molecule and the fuel that drives each cell of your body.

Our bodies need the correct amount of magnesium in our diets for us to sleep properly. If it's too high or too low, we can suffer from sleep disturbance.

The Dangers of Sepsis

Sepsis is a life-threatening condition and needs emergency treatment, usually in hospital. The symptoms of sepsis may be vague and not specific so seek medical advice immediately if you have any concerns. There has been much talk in the press recently about sepsis and a great push for medical professionals to be more alert than ever to its signs and symptoms.

What does sepsis mean?

Sepsis can be caused by any kind of infection, where the body mounts an overwhelming response to combat it. The body's response is so aggressive that it then becomes damaging to itself. The chemicals released can damage organs such as the liver or kidneys, for example by lowering blood pressure or causing the blood to clot. Both processes mean that delivery of oxygen and nutrients to certain organs is hampered, and therefore their functions are impaired. The terms sepsis and septicemia are often used interchangeably.

However, septicemia is a narrower term which means poisoning of the blood by bacteria. Septicemia is a possible cause of sepsis; the latter is a broader term which can involve organs as well as the blood.

What causes sepsis?

Any infection can cause sepsis if it can progress. This includes infections of the lungs, skin and urine (water infections), amongst many others. It can start from something as trivial as a scraped knee.

Although it can happen to anyone, it is more likely to happen in someone who is less able to fight off infection with a compromised immune system, such as the elderly, newborn babies, pregnant women and diabetics.

What symptoms should I look for?

Sepsis will usually be preceded by symptoms of an infection such as a cough, or diarrhoea, for example. If this infection takes hold before it is treated, its progression to sepsis may cause quite non-specific symptoms, such as lethargy, malaise, fever, shivering and nausea. As this worsens, it may also cause confusion or even decreased consciousness.

Red flag symptoms (with thanks to the Sepsis Society)

You should always seek help if you, or anyone you're with, develops

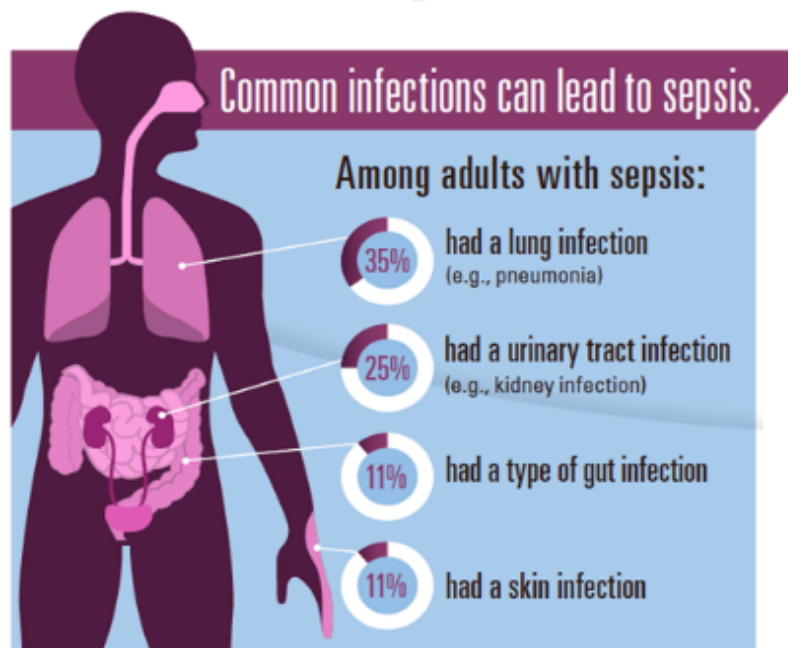
- Slurred speech or confusion.
- Extreme shivering or muscle pain.
- Passing no urine (in a day).
- Severe breathlessness.
- It feels like you're going to die.
- Skin mottled or discoloured.

Other symptoms which could suggest sepsis include:

- VERY high temperature (fever) or low body temperature (feels very cold).
- Feeling very sleepy or about to lose consciousness.
- Severe tummy (abdominal) pain.
- Feeling very dizzy or faint, or having a fit (seizure).
- A rash which does not fade with pressure.
- Not eating any food or drinking any fluid.
- Being sick (vomiting) repeatedly.

If you do have sepsis you may also have other symptoms of infection such as a flu-like illness (cough, fever, muscle aches and joint pains) or diarrhoea and vomiting.

Early treatment saves lives. Call 999 if you are very concerned. Call your GP immediately if you're concerned, but don't think you need to go straight to hospital. If there is any delay in talking to a doctor then call 999 anyway.



What treatment can be given?

The main way to manage sepsis is to treat the underlying infection, for example with antibiotics. This may be all that is needed to reverse the process.

However, severe infection may require hospital admission. 'Septic shock' is where the blood pressure decreases to a degree that requires hospital treatment and intervention with fluids through a drip, and special drugs. A blood pressure that is too low means that there is not enough force within the blood to adequately carry oxygen and nutrients to tissues and organs.

How can sepsis be prevented?

The main way to prevent sepsis is to be vigilant to the signs of infection.

So, for example, if you develop a persistent chesty cough and feel unwell with it, or signs of a urine infection such as stinging on passing urine, it is important to see your GP so that this can be tackled. Of course, you may not always require antibiotics for such symptoms, but it is important to seek advice if you feel unwell.

Although worrying cases of sepsis have appeared in the news recently, it is not a new condition.

However, in many cases it is preventable, and it is for this reason that it is currently the subject of an NHS drive to reduce its occurrence.

It is wise to be alert to new signs of infection and consult your doctor if you are concerned. Of course, if you are not sure if your symptoms warrant this, it is an excellent idea to call 111 or 999



The glass test with thanks to Meningitisnow.org

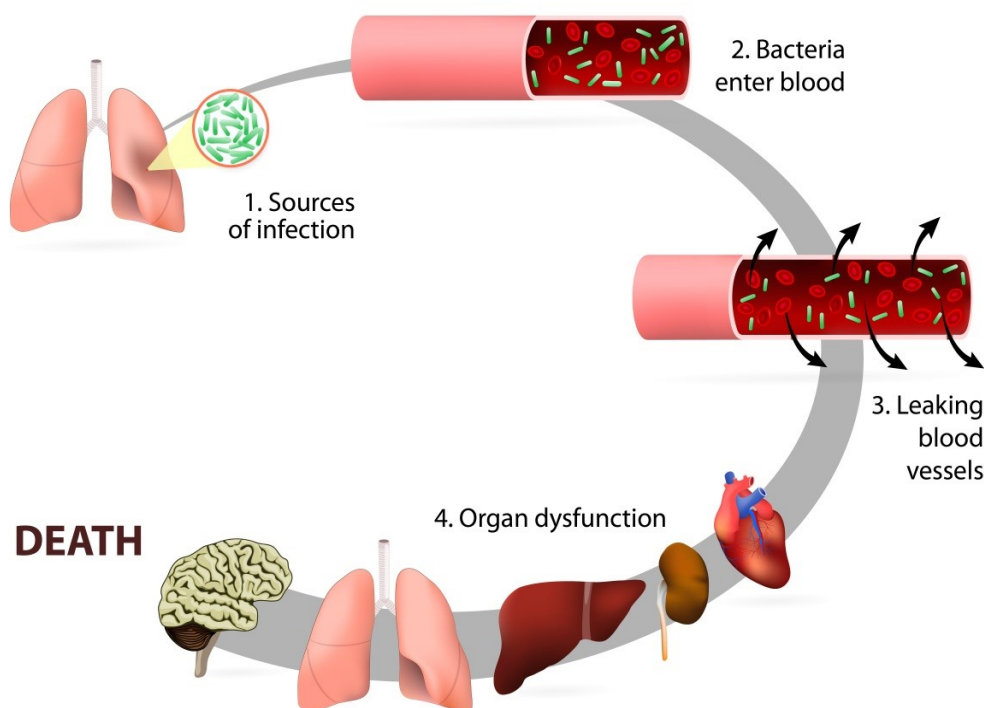
People with septicaemia may develop a rash of tiny 'pin pricks' which can develop into purple bruising.

**THIS RASH DOES NOT FADE UNDER PRESSURE.
DO THE GLASS TEST**

- Press the side of a clear glass firmly against the skin
- Spots/rash may fade at first
- Keep checking
- Fever with spots/rash that do not fade under pressure is a medical emergency. Dial 999.

Do not wait for a rash. If someone is ill and getting worse, get medical help immediately in any case

Sepsis



Garden Watch: Visitors in the night.

In previous issues of 'Pathways' we have published features of garden visitors during the day. However, we were aware of night visitors especially, those who disturbed the bird feeder on the wall. We decided to use an outback camera to see what was happening.



The first test pictures were taken in daylight. Here we have two sparrows and a blackbird at the feeding tray. The camera was set up overnight, and about 2,500 pictures were taken. The pictures are triggered by any small movements, many being leaves blowing in the wind. The infra-red pictures taken were also hopelessly over exposed (bleached out).

Adjustments were made to reduce the sensitivity of the PIR detector, and the brightness of the infra-red lights, and camera positioned further away from feeding tray. The camera was left overnight. We do know several hedgehogs appear in the garden about 10.30 pm. However, the following morning when 500 or so pictures were viewed. There were multiple pictures of the hedgehogs, all showing two hedgehogs at the bottom of the wall, both around 9" long.

The picture illustrated was taken at 00:53 a.m. Infra-red pictures are displayed as black and white images. One hedgehog's eye is clearly visible. This is cat's eye type reflection of the infra-red lights on the camera. Nothing much was recorded until about 4am. There multiple pictures of magpies. At about quarters to six, the camera reverts from the infra-red mode to the daylight mode. Multiple pictures of magpies and wood pigeons were recorded.

There are a couple of problems with the Outback camera model we tried. Firstly, in the infra-red field



the field illumination is brighter in the centre. Secondly, the focus is fixed, which we suspect is about 15 feet. It means that the best picture will be taken when the camera is at least 10 feet away from the subject.

Infra red LED array

Picture lens



Then Swann Outback Camera

An outback camera is a specialised camera for surveillance. In addition to its normal camera function, it has a passive infra red (PIR) detector to detect heat which is coupled to the picture catching mechanism. There are also two arrays of infra-red light emitting diodes (LED) to light up the subjects at night. It records the heat rather than light. Infra red light not visible to our or most animal eyes.



Research Corner: Cardiac abnormalities—Fill Your heart Thanks to ME Research UK

New findings from Newcastle show that levels of the cardiac marker brain natriuretic peptide are increased in ME/CFS. An increasing amount of research has revealed heart abnormalities in patients with ME/CFS. For example, people with the illness have been found to have a short QT interval and a reduced cardiac output. These changes may occur before any symptoms are apparent. Much of the recent work on cardiac dysfunction in ME/CFS has been carried out by Prof. Julia Newton and her team at Newcastle University, including studies funded by ME Research UK.

In 2012, they used magnetic resonance imaging and cardiac tagging technology to show that several measures of the heart were lower in ME/CFS patients than in healthy control subjects, including left ventricular mass, stroke volume, cardiac output and end-diastolic volume (see overleaf for a description of these terms). In further studies, they found a strong association in ME/CFS patients between the total volume of blood and cardiac end-diastolic wall mass.

Brain natriuretic peptide

Continuing their work in this area, the team has recently published a paper in the journal *Open Heart* looking at levels of brain natriuretic peptide (BNP) in ME/CFS and correlating these with measures of cardiac dysfunction.

Despite its name, BNP is a hormone that is secreted by the muscle cells of the heart and is produced when the ventricles are overstretched to accommodate an increase in blood volume. Circulating BNP causes a decrease in blood pressure and in cardiac output and has found use clinically as a diagnostic and prognostic marker of heart failure.

In their current study, the investigators recruited 42 patients with ME/CFS and no other illness, as well as 10 sedentary control subjects matched for age and sex. The participants' hearts were examined using magnetic resonance (MRI) techniques to provide a number of measures of cardiac function, including cardiac volumes at the end of systole and at the end of diastole. In addition, blood samples were taken, and plasma BNP levels were measured using an enzyme immunoassay. Increased BNP levels. The first important finding was that BNP levels were significantly higher in ME/CFS patients than in sedentary control subjects, with mean levels of approximately 500 versus 300 pg/mL, respectively.

Furthermore, both end-systolic and end-diastolic cardiac volumes were significantly lower among patients with high BNP levels (defined as being greater than 400 pg/mL) than in those with low BNP levels. BNP tends to be a sign of cardiac volume overload, so this association is not what one would normally expect to see.

One explanation suggested by the researchers is that the high level of BNP is causing an excessive production of urine, which reduces the total volume of circulating blood (as seen in their earlier study), leading to a smaller cardiac volume. It is important to note that none of these measures was related to the duration of illness, indicating that the results are unlikely to be due to deconditioning (i.e. they were not the result of the heart adapting to less physical activity).

What might these results mean to patients? One possibility put forward by the investigators is that measurement of BNP levels may be a convenient way by which to identify those ME/CFS patients with cardiac abnormalities who would benefit from specific treatments, although additional studies would be needed to confirm this. This approach may also be valuable in identifying a specific cardiac subgroup of ME/CFS patients, and better understand the diverse nature of this illness.

Brain natriuretic peptide (BNP), also known as B-type natriuretic peptide, is a hormone secreted by cardiomyocytes in the heart ventricles in response to stretching caused by increased ventricular blood volume. BNP is named as such because it was originally identified in extracts of pig brain.

The physiologic actions of BNP are like those of ANP and include decrease in systemic vascular resistance and central venous pressure as well as an increase in natriuresis. The net effect of these peptides is a decrease in blood pressure due to the decrease in systemic vascular resistance and, thus, afterload. Additionally, the actions of both BNP and ANP result in a decrease in cardiac output due to an overall decrease in central venous pressure and preload because of the reduction in blood volume that follows natriuresis and diuresis.

Research Corner: Inside out with *thanks to ME Research UK***A new study looking at the link between irritable bowel syndrome and ME/CFS**

Irritable bowel syndrome (IBS) is a relatively common condition characterised by several symptoms affecting the digestive system, including stomach cramps, bloating, diarrhoea and constipation. The symptoms can be different between individuals and are often triggered by stress or particular foods. Interestingly, the prevalence of ME/CFS is estimated to be 35 times higher among people with IBS than in the rest of the population. And, conversely, there is also a high prevalence of IBS among people with ME/CFS. But that's not the only link between the two conditions.

Both ME/CFS and IBS are often reported to occur after an infection and are also both associated with abnormal activation of the immune system, as indicated by raised levels of various cytokines and immune cells. There is also evidence of changes to the gut microbiome in both ME/CFS and IBS. The microbiome generally refers to the collection of around 100 trillion microorganisms, including bacteria, that live on or inside the human body. Many of these bacteria are beneficial to us and essential to our survival. In the gut, they live on the membranous lining, or mucosa, and break down our food and help protect us against infection. This whole area has become a hot topic of research in many diseases

The similarities between ME/CFS and IBS suggest that the two conditions may be part of a spectrum of illness, with shared pathophysiological changes in response to infection. This is the fascinating idea that Prof. Yan Yiannakou and his team in Newcastle are planning to investigate in a new project recently awarded funding by ME Research UK. Prof. Yiannakou suggests that if the two conditions are linked in this way, then 'patients with ME/CFS alone would have mucosal immune and microbiome changes that are like, though less pronounced than, patients with both ME/CFS and IBS'. To explore this, the team will recruit four groups of individuals: 25 patients with ME/CFS alone, 25 with IBS alone, 25 with both ME/CFS and IBS, and 25 healthy control subjects.

Following clinical assessment, blood samples will be collected to analyze a variety of markers of immune activation, while stool samples will be taken from which to measure changes in the faecal microbiome using DNA analysis. In addition, in five individuals from each group, biopsies of the colon will be taken in order to analyse the mucosal immunology and microbiome more directly. This whole process is particularly challenging and involves invasive tests, so its feasibility and acceptability to patients need to be explored. These are relatively small groups of patients, but Prof. Yiannakou hopes to assess the feasibility of the techniques and provide pilot data on which to base larger studies examining the links between the gut microbiome and immune system in ME/CFS and IBS.

Accelerated ageing Rajeevan et al., Journal of Translational Medicine, 2018

The central idea behind this new study is that ME/CFS shares many of the characteristics of accelerated ageing, a condition which has been implicated in several other diseases such as rheumatoid arthritis and multiple sclerosis. Accelerated ageing generally refers to a premature decline in the immune system, and one way to assess it is by measuring the length of telomeres, the caps which protect the end of our chromosomes from damage. In a group of 64 patients meeting the criteria for CFS, the relative telomere length was significantly shorter than in non-fatigued individuals, and the researchers concluded that ME/CFS could therefore be included among those conditions associated with accelerated ageing.

Can probiotics help? Corbitt et al., Probiotics and Antimicrobial Proteins, 2018

As we discuss elsewhere in this issue, there is a high prevalence of irritable bowel syndrome (IBS) among ME/CFS patients, and vice versa, and we have recently funded a pilot study to explore this link further. Probiotics are used to restore the natural balance of bacteria in the gut, and there is some evidence they can help relieve the symptoms of IBS, although questions remain about their effectiveness. This review looked at 25 studies investigating probiotic supplementation in these two conditions. While there was substantial data supporting their use in IBS, the evidence was poor and limited for any benefits of probiotics in ME/CFS patients, indicating that more research into this issue is needed.

Can probiotics help ME/CFS? With thanks to ME Research UK

ME Research UK funded a new research study led by Prof. Yan Yiannakou in Newcastle looking at changes to the immune system and gut microbiome in patients with ME/CFS and those with irritable bowel syndrome. Gastrointestinal symptoms are very common among ME/CFS patients, and can include abdominal swelling and/or pain, nausea and vomiting, and abnormal bowel behaviour. Indeed, their presence is one of the criteria that can lead to diagnosis of the illness.

Studies of the dietary habits of individuals with ME/CFS reveal that a significant proportion use nutritional supplements to relieve these symptoms, and many also report food intolerances, including sensitivities to gluten or milk protein. This is borne out by the experiences of many of the people who contact us, and also by the extensive discussions taking place on Internet forums.

So, are dietary supplements or treatments of any benefit to patients with ME/CFS? And which ones are the most helpful? Even just a brief Google search shows that people have tried a wide range of things in their search for relief, with varying results. But last year a team in Queensland, Australia addressed the question by performing a systematic review of scientific studies in which ME/CFS patients modified or supplemented their diet.

Seventeen studies qualified for the review, and together they investigated a total of 14 different interventions including antioxidants, vitamins and NADH. Many of these did not show any benefits on patient-reported outcomes such as fatigue, physical activity and quality of life, but one intervention that did demonstrate some potential was the use of probiotics. It is thought that probiotics may have value in ME/CFS by improving the gut microbiome, which is altered in the disease, and by decreasing inflammation. The gut microbiome is the collection of intestinal microorganisms, including bacteria, living on the membranous lining that break down our food and help protect us against infection. There is also evidence that reduced levels of certain gut bacteria may be linked to cognitive problems in ME/CFS.

Which leads us on to a new systematic review recently published in the journal *Beneficial Microbes*, focusing specifically on the value of probiotic treatments in patients with ME/CFS.

The Spanish team of investigators searched the medical science literature for studies published in the previous decade that looked at the effects of probiotic therapy in patients with ME/CFS. Disappointingly, they only found two, both of which could really be considered pilot studies (i.e. they had a relatively low number of participants). Nevertheless, they were judged to be of high quality with regard to their methodologies and risks of bias. The researchers also looked for studies in fibromyalgia but found none.

In one study, 48 patients with ME/CFS were treated with the *Lactobacillus casei* strain Shirota or placebo for 8 weeks. The treatment was well tolerated, and there was a significant decrease in anxiety scores (as measured using the Beck inventory) among those receiving probiotics compared with placebo, but no change in scores of depression. Stool samples taken after treatment showed moderate increases in the quantities of *Bifidobacteria* and *Lactobacillus*.

In the second study, 35 ME/CFS patients received either *Bifobacterium infantis* or placebo, again for 8 weeks, but these investigators focused on changes in markers of inflammation, namely C-reactive protein, interleukin-6 and tumour necrosis factor- α . Following treatment with the probiotic, on average, plasma levels of all three markers were significantly reduced from pretreatment levels, and were also lower than levels in the placebo group (which increased slightly or remained the same). In fact, 71% of patients on probiotics had decreased inflammatory markers after 8 weeks.

So, the findings of these two trials indicate that some probiotic strains may be helpful in reducing symptoms of anxiety and inflammation in ME/CFS patients, and they also influence the gut microbiome. That being the case, it seems a shame that there have not been more probiotic trials in ME/CFS (and apparently none in fibromyalgia).

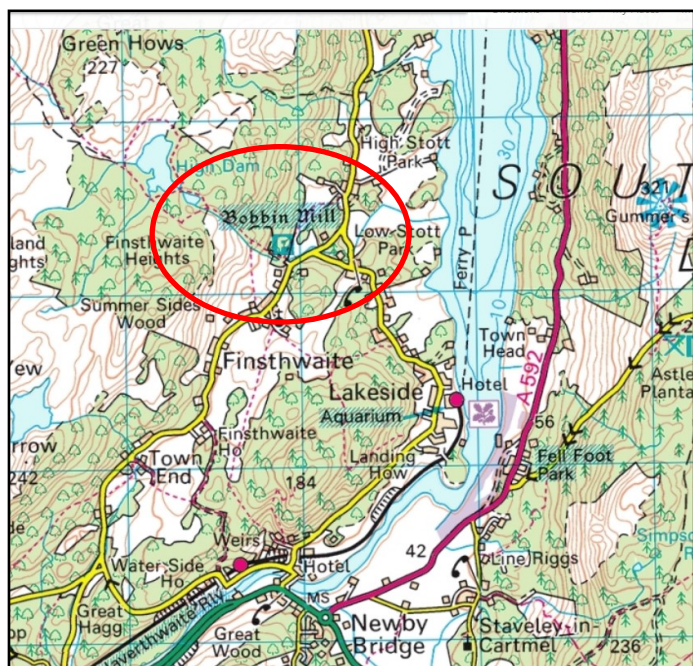
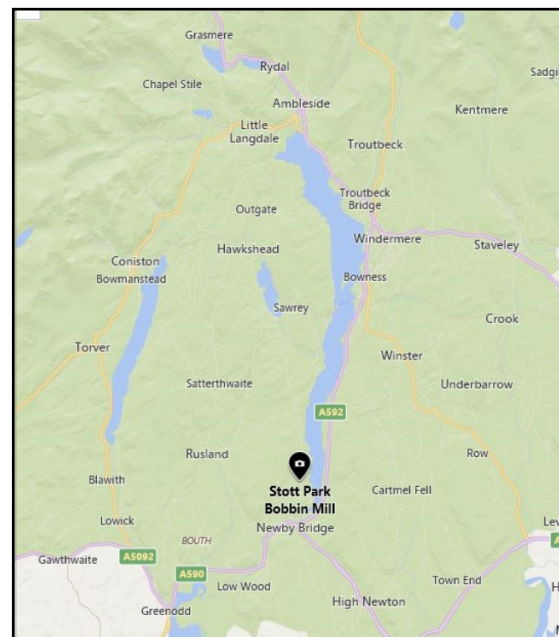
As is so often the case, the investigators must conclude that more research is necessary to confirm these beneficial effects in more individuals and using other probiotics. It is also worth mentioning that there were no assessments of other key symptoms of the disease such as pain, fatigue and cognitive dysfunction which may also be influenced by this treatment.

Out and About: A visit to the Stott Park Bobbin Mill by Carolyn

It was on a cold day in winter at the end of a long renovation project in the bungalow when we decided we needed a break and so booked a week's holiday in Cumbria for a few months ahead. Then came the inevitable question from the man of the house 'what shall we do when we get there'. That question has become more difficult as we have been many times to the same location and finding new things to do can be a challenge, but, not this time. Quick as a flash he got back from me 'I would really, really, like to go and see the Bobbin Mill'. This brought the hesitation of a man who had not expected what he had just heard and then an 'ok' from the man who knew he couldn't side-step it any longer, it was not negotiable, we were going.

The day arrived and up in our lovely Bassenthwaite cottage home for the week I was up early packing a picnic for the trip down the west shore of Windermere that leads to Stott Park Bobbin Mill situated close to the village of Finsthwaite and near Newby Bridge. A lovely drive.

We found the mill surrounded by coppiced woodland, the main mill buildings grouped around an open yard. We walked down to the mill shop to get our tickets for the tour of the mill, the 'tickets' being two vividly painted blue bobbins!!



The Mill is in its original state, built in 1835, with a row of windows on its upper floor that provided as much light as possible for the original lathe shop formerly within. Against the gable wall is saw bench, driven, like all the machines, by a belt from the line shaft. Flanking the old mill is the large single-story new lathe shop, built with the boiler and its tall, red-brick chimney, during the 1870s, to early 1880s. There is an also the Blacksmith's shop, another original building but built separately to minimize the risk of fire. Behind the mill's waterwheel pit is a large travelling saw been and crane. Also, here are the infilled millpond and drying shed with louvred sides. Originally, the houses opposite the mill were homes for the 'Bobbin Master' and his workers.

Picnic eaten by the stream we made our way across where a little knot of people was waiting for the tour to begin.





The tour and machinery demonstration

Smaller Bobbins formed much of Stott Park's production and were made from turning a single short length of coppice wood.

Long coppice poles, peeled of bark, were cut to manageable lengths and seasoned for up to a year in the coppice barn. They were then cut on the circular saws into cylindrical blocks, the length of the finished bobbin.

A hole was bored through the block.



The block was then turned on a 'roughing lathe' to the outline shape required: bobbins had two ends and a shank.

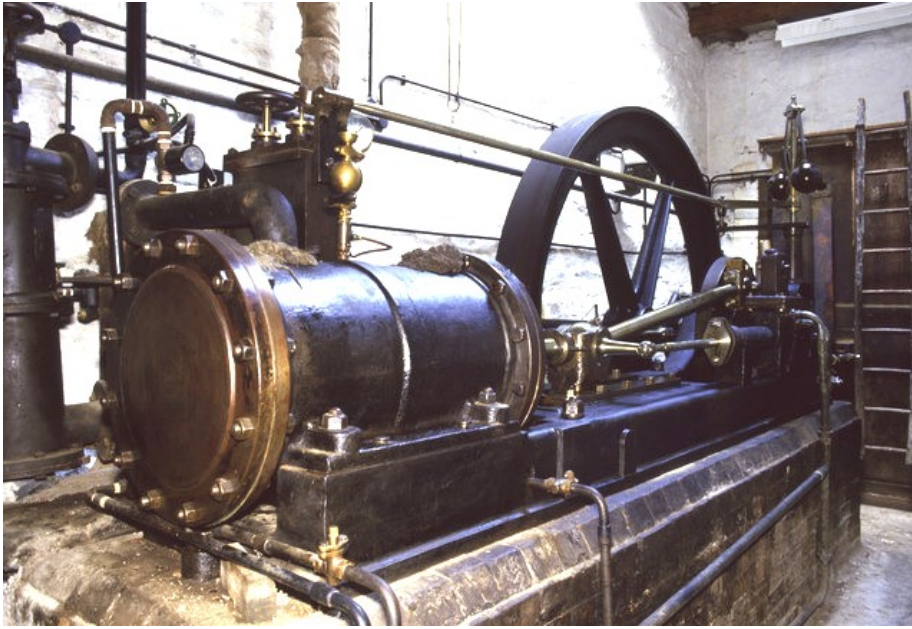


The rough bobbin was then dried because crisp, firm wood could be worked more easily and did not tear or drag on the lathe. The holes were then cleaned out and the final shape required was produced on the finishing lathe.



Some bobbins were placed in a revolving drum with beeswax to polish them; also, some were coloured, but mainly they were produced to feed the Cotton Mills of Lancashire which required millions of bobbins for all stages of the spinning and weaving process.





The power for the machinery came from either a water wheel, or later a steam engine or later on an electric motor. The latter was installed in World War 2 to save coal. On our visit, the electric motor was used—and surprisingly it took quite a while for the line shaft to come up to speed.

The power is then transferred via leather belts a pulley to the various machine. The belts and machines were originally unguarded, but safety cages and barriers have been installed for public demonstrations. In old photographs the shavings were everywhere. There was no provision to remove waste. It just accumulated on the floor. There are reports of workers being up to knee height in shavings.



It would be a health and safety nightmare. There are records of nasty accidents in the literature although no fire is recorded. The waste would be used to fire the boiler.

By 1900 standardization of textile machinery made automation of bobbin manufacture possible but interestingly, Stott Park survived because of its old-fashioned machines that could be adapted to make alternative products when demand for bobbins fell away. They

made simple products, bobbins for the wire trade, 'spout bobbins' for down pipes, and for the shoe trade, a reel for holding two ounces of thread for hand stitching shoes. They were even able to take advantage of the craze for children's yo-yos in later years.

Knocking On and Off.

During the working day, the layshaft would continue to turn, and never be stopped.

It was necessary to be able to stop the lathe to position a workpiece or adjust the cutting tools. There being no equivalent of a clutch. The way this was done was to knock the belt off the drive pulley on to an adjacent pulley which was not fixed to the drive shaft. It continued to turn, but nothing happened. As the belts were always moving at speed, there was either a mechanical lever to knock the belt on and off the drive pulley or a suitable piece of wood would be used.

This is the reputed origin of the phrase 'knocking off' when finishing work.





Although production continued until 1971, its buildings and machines had remained largely unaltered since the 1880's. By the time of closure in 1971 for a variety of reasons, the age of its workforce, and the labor-intensive machinery, and, probably above all, the increasing preference for items cheaply produced from plastic rather than wood, the physical state of the buildings was poor: two of the coppice barns were on the verge of collapse, and the main roofs needed replacement. The mill was in effect a 'time capsule', which presented a unique opportunity to preserve and protect its industrial heritage. Historical and Archaeological research is still carried out today to provide accurate information for the tour and machinery demonstrations, enabling visitors to appreciate this vanished Lakeland industry.

There is so much to see and learn about the Bobbin Mill that it has been difficult to know what to pick out. It had its Child Labour of course and until 1878, boys as young as eight years of age were employed in the mill - how they escaped with their lives amongst such dangerous unguarded machinery is quite amazing to think about, but records say that most did survive. Later, boys from the Ulverston Workhouse were offered as apprentices and they were to be clothed during their term. This can be seen from the written reports that show the Relieving Officer of the workhouse visited the mill quarterly to check all was as it should be for the apprentices.

There are stories of the owners of Stott Mill, and of those whose whole working lives were spent working at the Bobbin Mill. It is a day out we would thoroughly recommend, one that I will never forget, a real look into our industrial history and the lives that went with it.

Harriet Martineau wrote the following *Household Words*, 1851 'There are myriads of bobbins sent from the neighbourhood of Windermere, all over Lancashire and Yorkshire, and into Scotland and Ireland, and to the United States, and our own colonies, and many to busy Belgium....'

Verdict: Well worth a visit, providing you can walk or climb steps. As access to the inside of the Mill is only with guided tours, someone in a wheelchair would be disappointed.



Spicy Turkish kebabs with 'Esme' salad

Serves 4

Nutritional values per serving:

Energy 428 kcal
Protein 36.8g
Fat 12.7g
Saturated fat 2.3g
Carbohydrate 42.3g
Sugar 5.8g

Cooking Method

Cut the chicken into chunky 3cm (1 1/4in) pieces, in a bowl, mix the olive oil, tomato purée and red pepper paste together, then stir in the rest of the ingredients and the chicken. Cover and leave to marinate at room temperature for 30 minutes or at least 2 hours in the fridge.

To make the Esme salad, finely chop the green pepper, cucumber, red onion and tomatoes. Mix in the crushed garlic, scoop into a sieve set over a bowl and leave for 30 minutes until most of the excess liquid has drained away.

Shortly before you are ready to cook, preheat a barbecue or non-stick, ridged cast-iron griddle or griddle pan until hot, then lower the temperature to medium. Thread the pieces of marinated chicken onto 4 metal skewers. Barbecue or griddle for 12-15 minutes, giving them a quarter turn every 3 minutes or so, until the pieces of chicken are browned and cooked through, but still moist and juicy in the centre.

Tip the chopped vegetable mixture into a bowl and stir in the rest of the ezme salad ingredients and some black pepper to taste. Serve with the kebabs and some whole-wheat couscous on the side.



Ingredients

For the kebabs:-

500g (1lb 2oz) skinned boneless chicken - thighs and breasts
2 tbsp olive oil
1 tsp tomato purée
1 tsp Turkish red pepper paste
½ tsp coarsely ground black pepper
½ tsp dried chilli flakes
1 tsp chopped fresh thyme leaves
1 tsp Aleppo pepper OR, ½ tsp sweet paprika
1 ½ tbsp chopped fresh mint leaves
600g (1 lb 30z) steamed whole-wheat couscous, to serve

For the Esme salad:-

½ large green pepper, seeded
¼ large cucumber, peeled, halved and seeded
1 small red onion
225g (8oz) vine-ripened tomatoes, skinned
1 fat garlic clove, crushed
1 tbsp extra-virgin olive oil
1 ½ tsp red wine vinegar
½ tsp Aleppo pepper or a pinch of chilli powder
1 small bunch of fresh flat-leaf parsley, chopped
Leaves from 2 fresh mint sprigs, chopped
Freshly ground black pepper

Making A Salad

There was this couple who took their son on a camping trip and in the room they were staying in, there was only one bunk bed. So the couple decided to lay on the top bunk and when they were about to have sex they made up code words for faster and slower. Faster was lettuce and slower was tomato.

When the son asked what they were doing, they told him they were making a salad. The little boy then replied "Well could u be more careful because your spillin salad dressing on my face"

Avoiding Skin Cancer *with thanks to CRUK*

Around 37 people are diagnosed with malignant melanoma, the most serious type of skin cancer, every day in the UK. The main cause of skin cancer is too much ultraviolet (UV) radiation from the sun or sunbeds. Finding skin cancer early saves lives, so it's important to know what's normal for your skin and tell your doctor about any changes that are unusual or don't go away. Most changes are not caused by cancer, but it's important to get them checked out by a doctor as soon as possible.

There are two main types of skin cancer. Malignant melanoma (also known as just 'melanoma'), the most serious type of skin cancer. There is also non-melanoma skin cancer. It's much more common though usually much less serious, but it still needs treatment. Skin cancer can start anywhere, even in places that are rarely exposed to the sun. Melanoma can spread inside your body. Other types of skin cancer may also spread but this is much less common. Getting skin cancer diagnosed and treated early can make a real difference. So it is important to get any skin changes checked out by a doctor.

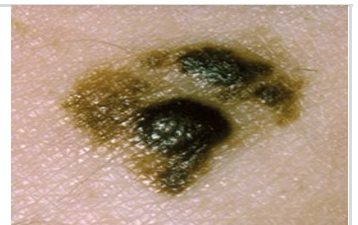
What affects the risk?

- **Age.** Like most cancers, the risk of developing skin cancer increases as you get older. But it is also unusual because more than a third of all cases of melanoma in the UK are found in people aged under 55.
- **Personal or family history.** Your risk is higher if you or a close family member have had skin cancer. Or if you have had some other types of cancer.
- **Skin type and colour.** People who have lots of moles or freckles, sunburn easily or have fair skin, or red or fair hair, or light-coloured eyes have a higher risk. It is less common, but people with naturally brown or black skin can also develop skin cancer.
- **Too much sun.** Getting sunburnt increases the risk in adults and children. Protect skin from too much sun with shade, clothes and sunscreen with at least SPF15 and 4 stars.
- **Jobs.** The risk is higher if you have, or have had, an outdoor job - such as farm or building work or any-other job that means you are outside a lot in the daytime.

Skin cancer may appear as a new mole or mark or it can be a change to something you've had for a while. The ABCD rule can help you remember some of the different things to look out for.

These images are just examples:

Asymmetry -
the
two halves may not
match.



Colour -
may be
uneven, with more
than one shade.



Border -
may be
irregular, blurred or
jagged.



Diameter -
may be at
least 6mm wide, the
width of a pencil



What to look out for?

Get to know what your skin normally looks like. You may have some moles or dark patches that are flat or slightly raised. Usually these will stay harmless all your life. Show your doctor if you notice any changes in how your skin looks or feels, or if you have moles and notice one that looks different to the others. And make sure you go back if something you've shown your doctor before keeps changing. Also show your doctor if you notice:

- a new growth or sore that will not heal
- a spot, mole or sore that itches or hurts
- a mole or growth that bleeds, oozes, crusts or scabs

Please note that any of these signs can happen with or without any of the ABCD changes to the right.

North of Doncaster. *Personal comment by Trevor Wainwright***Travel Diary to the Holy Land Part 6:**

Joseph our guide told us: Jerusalem had fallen to the British on 11 December 1917, General Allenby understanding the symbolic sensitivity of Jerusalem to both its residents and religious adherents the world over, elected to make his entrance through Jaffa Gate on foot heit best due to tension between differing Christian faiths as to who should hold the 500 years old key, it was given to a Muslim family by contract, as a way of maintaining a neutral guardian for the multi-denominational Christian church. Descendants of the Muslim family still hold the key to this day and carry out the daily ritual of opening the church. Upon declaring martial law in the city promised that "every sacred building, monument, holy spot, shrine, traditional site, endowment, pious bequest, or customary place of prayer of whatsoever form of the three religions will be maintained and protected."

He also told us there is a story though that Jerusalem was initially offered to a British Army Private, Private Murch, a British cook bivouacked in the north of the city, who had been sent on December 9 by his commanding officer to the nearby village of Lifta to find some eggs for breakfast. When Murch was approached by the mayor of Jerusalem, on horseback and flying a white flag, offering to turn over the keys to the city, Murch replied, "I don't want yer city. I want some eggs for my hofficers!". Nevertheless, Murch reported this and so the stage was set for the surrender when Allenby arrived on December 11th.

We entered the Church of the Holy Sepulchre again it was like so many very ornate. This did not detract me from what I had come to see, as I looked upon the 12th Station wondering what my emotions would have been knowing that after hours of agony Jesus had finally died. Would I have spoken with scorn, or quietly walked away. Nearby was what was said to have been the hole where the cross was placed with a picture of a man sadly down looking where the cross had been.



Station 12 where Jesus died on the cross



Where the cross was said to have been

The 13th and 14th Station depicted Jesus being taken down from the cross and laid on the Stone of Unction, a polished red stone and measures six metres in length and one meter wide where according to Jewish tradition.



Pilgrims paying homage at The Stone of Unction



Angry monk just about to chase me away from the Sepulchre

He was anointed and wrapped in shrouds as the Jews customarily prepared their dead for burial at the time, then placed in the tomb. We watched as fellow pilgrims kissed the stone or rubbed it with oil and then wiped it with a cloth. Going to the tomb we found it was going to be a long wait, so we decided against it and come back another time. I decided to take a picture of the entrance and did, much to the dismay of a tall grey bearded monk who ran towards me waving me away.

We headed back to our hotel passing the nearby Mosque of Omar. According to history after the Siege of Jerusalem in 637 by the Rashidun army Patriarch Sophronius refused to surrender except to the Caliph Omar. Omar travelled to Jerusalem and accepted the surrender. Visited the Church of the Holy Sepulchre, was invited to pray there but declined so as not to set a precedent and thereby endanger the church's status as a Christian site. Instead he prayed outside, on the steps east of the church in a place where believed to have prayed. The current Mosque of Omar, which is at a totally different site than the one where Caliph Omar has allegedly prayed and where the earlier mosque was located, since it stands to the south of the church rather than to the east of it, was built in its current shape by the Ayyubid Sultan-Afdal ibn Salah ad-Din 1193 in memory of this event. This new position is likely because the entrance to the Church of the Holy Sepulchre had by then moved from the east to the south of the church, because of repeated destructive events that affected the Holy Sepulchre during the 11th and 12th centuries.



*The Minaret at
The Mosque of Omar*



z Picture of a craft workshop in

Back at the hotel I went once again to Christ Church nearby. Looking first at a model of Jerusalem in their museum, amazed at the scope of it and how they had got in so much detail. There were golden domed buildings in abundance I almost expected to see them light up. Following the model Jerusalem there was picture of an early craft shop along with exhibits of what had been made there, good crafted goods unlike some of the massed produced trinket we saw on offer during our travels, and in any case probably far more expensive due to the craftsmanship.

After dinner it was a short walk to the Western Wall (Wailing Wall), this was something I did not want to miss. We arrived and waited to be admitted looking at a notice which was headed

**“THE DIVINE PRESENCE NEVER MOVES FROM
THE WESTERN WALL”**

followed by a brief history of the temple how it was built destroyed rebuilt then destroyed again after the death of Jesus. The Wall being a remnant of the western Temple Mount where Jesus threw out the money changers, at the bottom the words from Isaiah 56:7 saying “My House Is A House of Prayer for All Peoples”. I was reminded of what our guide Joseph said about the land being called Holy Land as a Land for All. We went in I was awestruck at the sheer size of it, we walked down the stairs to the courtyard donned Kippas and walked slowly to the wall, I could feel the reverence in which it the site was held by the other worshippers. I stood at the foot of the wall looking up again awestruck at the size of it. There was time for prayer for us too at the wall and a chat with other worshippers before heading back to the hotel, ready for our final full day.



Arrival at The Wailing Wall



A closer view we actually go to touch it.

To be continued....